



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,727	10/25/2001	Bruce M. Drawert	CM04066H	2844
22917	7590	05/06/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			NGUYEN, KHAI MINH	
			ART UNIT	PAPER NUMBER
			2687	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/002,727

Applicant(s)

DRAWERT, BRUCE M.

Examiner

Khai M Nguyen

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-18 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. This Office Action is response to Amendment filed on 12/09/2004.  
Claims 1-19, and 42-72 are pending.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19, and 42-72 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas (U.S.Pub-20010050633).

Regarding claim 1, Thomas teaches a method for GPS-based regional time synchronization (fig.1, paragraph 0017) comprising:

receiving, at a master site (fig.3, paragraph 0043-0044), information from a GPS satellite that indicates a position of the satellite and a satellite time-of-day (fig.2-4, paragraph 0046-0047, *the base model is to receive precise time and time of day information from a GPS receiver at a fixed location*) ;

determining, using the position of the satellite and a pre-determined position of the master site (fig.2, paragraph 0020, 0025), a time-of-day error value that represents a difference between the satellite time-of-day (fig.4, paragraph 0025, 0047), adjusted for a transit time of the information (paragraph 0144, 018-0149), and a corresponding master site time-of-day as reported by a master site, nanosecond-accurate clock (paragraph 0026); and

broadcasting to at least one slave site an indication of the time-of-day error value and the corresponding master site time-of-day (fig.4-5, paragraph 0047, 0081-0082).

Regarding claim 2, Thomas teaches the method of claim 1 further comprising the step of repeating the steps of receiving (paragraph 0135, 0139), determining, and broadcasting periodically (paragraph 0130).

Regarding claim 3, Thomas teaches the method of claim 2 further comprising the step of repeating the steps of receiving (paragraph 0135, 0139), determining, and broadcasting for each GPS satellite visible to the master site (fig.2, paragraph 0020).

Regarding claim 4, Thomas teaches the method of claim 1 further comprising the steps of:

receiving, over a period of time at the master site (fig.3, paragraph 0043-0044), information from the GPS satellite that indicates positions of the satellite and satellite times-of-day (fig.2-4, paragraph 0046-0047, *the base model is to receive precise time and time of day information from a GPS receiver at a fixed location*);

determining, from the information received over the period of time (fig.2, paragraph 0020, 0025), a rate-of-change of time-of-day error values (fig.4, paragraph 0025, 0047); and

broadcasting to at least one slave site the rate-of-change of time-of-day error values (fig.4-5, paragraph 0047, 0081-0082).

Regarding claim 5, Thomas teaches the method of claim 1 wherein broadcasting comprises transmitting via an inter-site network (paragraph 0039).

***Allowable Subject Matter***

4. Claims 6-18 are allowed.

Regarding claim 6: The following is an examiner's statement of reasons for allowance: Prior art teaches a method for GPS-based regional time synchronization. However, the prior art fails to teach receiving, at a slave site and at a time indicated by a slave site clock, information from a GPS satellite that indicates a position of the satellite and a first satellite time-of-day; storing information that indicates the time indicated by the slave site clock and how the time indicated by the slave site clock differs from the satellite time-of-day; receiving, at the slave site, an indication of a time-of-day error value and a corresponding master site time-of-day, as reported by a master site, nanosecond-accurate clock, wherein the time-of-day error value represents a difference between a second satellite time-of-day, adjusted for a transit time to the master site, and the corresponding master site time-of-day; determining a clock correction value for the slave site using the stored information, the time-of-day error value, and the corresponding master site time-of-day; and synchronizing a slave site clock with the master site using the clock correction value.

Regarding claim 12: The following is an examiner's statement of reasons for allowance: Prior art teaches base site. However, the prior art fails to teach a GPS receiver arranged to receive information from a GPS satellite that indicates a position of the satellite and a first satellite time-of-day; a clock coupled to the GPS receiver that

Art Unit: 2687

indicates a time at which the GPS receiver received the information; a clock controller, coupled to the GPS receiver and the clock, arranged to store information that indicates the time indicated by the clock and how the time indicated by the clock differs from the first satellite time-of-day, further arranged to receive an indication of a time-of-day error value and a corresponding master site time-of-day, as reported by a master site, nanosecond-accurate clock, wherein the time-of-day error value represents a difference between a second satellite time-of-day, adjusted for a transit time to the master site, and the corresponding master site time-of-day, further arranged to determine a clock correction value using the stored information, the time-of-day error value, and the corresponding master site time-of-day, and further arranged to synchronize the clock with the master site, nanosecond-accurate clock using the clock correction value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Citation of Pertinent Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Han** (U.S.Pub-20040213367) discloses Synchronizing satellite clock in base transceiver station.

**Yokev et al.** (U.S.Pat-5712867) discloses Two-way paging apparatus having highly accurate frequency hopping synchronization.

***Conclusion***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571.272.7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai Nguyen  
Au: 2687

4/29/2005

  
4/29/05  
LESTER G. KINCAID  
PRIMARY EXAMINER